REMARKS

This Amendment is submitted in response to the Office Action dated March 12, 2004, having a shortened statutory period set to expire June 12, 2004. In the present Amendment, Claims 1-25 have been cancelled and Claims 26-36 have been added. Claims 26-36 are now pending.

Amendments to the Drawings:

Figure 1 has been amended to include a "Prior Art" designation responsive to the Examiner's correct observation that a system having only prior art features is depicted therein.

Figure 2B has been amended as per the Examiner's suggestion (i.e. medium-speed designation "K bits/s" and high-speed designation "M bits/s" have been reversed between elements 34' and 36' and between 38' and 40'. Applicants appreciate the Examiner's diligence in discovering and pointing out such errors.

Figures 2A and 2B have been amended to correct the erroneous inclusion of invert request lines 42 and 44 in the prior art Figure 2A. Furthermore, the CE and UE elements, previously labeled 12 and 26 in Figure 2B, have been relabeled in Figure 2B as reference numerals 11 and 15 to reflect the different system structure between the corresponding units in Figure 2A and 2B.

Amendments to the Specification:

Responsive to the Examiner's objection, the Abstract of the invention has been corrected as set forth above to use more clear and concise language and to comply with the 150-word limit. Applicants point out that the present amendment to the Abstract reflects that the originally filed Abstract was previously amended by a preliminary amendment mailed on April 3, 2001 and submitted together as part of a reply to a Notice to File Missing Parts.

Furthermore, upon closer inspection and scrutiny, several paragraphs of the specification have been amended as set forth above in an effort to provide a much more clear, concise and consistent description of the inventive embodiments depicted in Figures 2B and 3. No new matter has been added.

Claim Rejections Under 35 U.S.C. § 103:

Claims 1-4, 7-12, 15-18, and 21-24 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of *Seazholtz et al.* (U.S. Pat. No. 5,812,786) in further view of *Polley et al.* (U.S. Pat. No. 5,999,563). Claims 5-6, 13-14, 19-20, and 25 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of *Seazholtz*, in further view of *Polley et al.*, in further view of *Kidambi et al.* (U.S. Pat. No. 6,424,626). In view of the merit in the grounds supporting many of the foregoing rejections, claims 1-25 have been cancelled, and claims 26-42 have been added. Applicants traverse the foregoing rejections as they may apply to the newly added claims for the following reasons.

Regarding the Examiner's grounds for rejecting claims 1-4, 7-12, 15-18, and 21-24, Applicants agree that *Seazholtz* discloses a variable rate, variable mode ADSL system comprising a CE and a UE, and further generally discloses that the transmission bit rate of the system may be asymmetrical and selectively reversible in direction. Applicants disagree, however, that anywhere, including the descriptions at col. 8, lines 17-20, col. 10, lines 35-45, col. 12, lines 5-30, and 55-62, and Figures 6-7, does *Seazholtz* disclose or suggest any method or mechanism for responding in any particular manner to an invert request message. Instead, the description of how the system inversion request is transported and processed (i.e. the inverting mechanism itself) is almost entirely limited to a passage in the Summary of Invention at col. 3, lines 56-62 explaining, "[t]he ADSL transceivers may be responsive to a control signal transmitted in the upstream channel which indicates that the direction in which data is transmitted should be reversed." This passage, together with the passage at col. 13, lines 57-62, explaining that "appropriate OAM&P data" may be transferred to invert the system, constitutes the entire description of how an inversion request is delivered and processed by the *Seazholtz* system.

In further regard to the rejections of claims 1-4, 7-12, 15-18, and 21-24, Applicants agree that *Polley* discloses inter-modem negotiations for variable rate DSL signaling, and Applicant is further aware that tone signaling between modems is known. Applicants contend, however, that the usage of tone-type modem communications as a DSL session negotiation forum such as the

specific implementation disclosed by *Polley* (i.e., implemented at the beginning of the communication session through the exchange of tones between modems) does not render Applicants particular utilization of tone generating and decoding, in terms of sequence and/or disposition of tone generating and decoding equipment in a unique ADSL environment, obvious when combined *Seazholtz's* extremely vague description of ADSL inversion request processing.

In an effort to more specifically characterize and distinguish Applicants' proposed invention from the subject matter disclosed by *Seazholtz* and *Polley*, claims 1-25 have been cancelled and effectively replaced by added claims 26-36. Newly added independent claim 26 recites a method for inverting an ADSL system including steps that leverage features particular to ADSL systems. Specifically, the context of the method as set forth in the preamble of claim 26 requires that the object ADSL system comprises "a central exchange equipment (CE) connected to a service provider network and a user equipment (UE) connected to a user workstation, wherein said CE and said UE are interconnected by a PSTN link, said CE including an ADSL transceiver and a splitter coupled between said CE transceiver and said PSTN link, said CE splitter including a low-pass filter for separating low frequency voice signals from high frequency ADSL signals transmitted from said UE over said PSTN link..." The method deployed within the foregoing ADSL environment includes steps of:

"generating an invert request message encoded as a tone sequence within said UE and transmitted to said CE over said PSTN link;"

"receiving the tone-encoded invert request through the CE splitter low-pass filter;" and

"decoding the received tone-encoded invert request utilizing a tone decoder communicatively coupled between the CE splitter low-pass filter and said CE transceiver."

Nothing in *Seazholtz* or *Polley*, either individually or in combination discloses or suggests delivering an ADSL inversion request as a tone sequence utilizing a tone generator communicatively coupled between a UE transceiver and PSTN link, nor does either reference disclose or suggest decoding functionality analogous to the claimed tone decoder communicatively coupled between a CE splitter low-pass filter and CE transceiver.

As embodied by newly added method claim 26, Applicants have discovered a particularly useful method for processing an ADSL inversion request that leverages the dual-mode

communications characteristics of ADSL (i.e., tone generators and decoders coupled to splitters utilized for communicating an inversion request and corresponding acknowledgements so that inversion can be established and commenced with minimum disturbance to on-going ADSL transmissions over the PSTN link or modifications to extant ADSL equipment) in a manner not disclosed or rendered obvious by combining *Polley's* disclosure of tone-type modem communications with the very limited disclosure by *Seazholtz* of the manner in which an ADSL inversion cycle is initiated and processed. Furthermore, Applicants point out that what little description *Seazholtz* does provide of how an invert request is processed is entirely limited to using an ADSL control channel to send the request. Attempting to combine *Polley's* tone-type inter-modem communications would therefore be a complete departure rather than an improvement or modification of the control channel type ADSL inversion technique disclosed by *Seazholtz*.

CONCLUSION

In view of the foregoing, Applicants believe that claim 26 and all claims depending therefrom have been placed in condition for allowance and a Notice to that effect is hereby requested.

No extension of time for this response is believed to be necessary. However, in the event an extension of time is required, that extension of time is hereby requested. Please charge any fee associated with an extension of time as well as any other fee necessary to further the prosecution of this application to **IBM CORPORATION DEPOSIT ACCOUNT No. 09-0457**.

Respectfully submitted,

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